From: (b) (6)

Sent: Tuesday, September 06, 2016 8:29 PM

To: HarborComments

Subject: Portland Harbor Superfund Site

To Whom It May Concern:

ELECTRONIC REVIEW FOR THE ENVIRONMENT has reviewed portions of the Proposed Plan for Portland Harbor and has the following comments:

1) Dioxins and furans are shown as contaminants of concern however the presentation of the data has not been adequately presented. The toxicity equivalence quotients (TEQs) data presented are high level summaries of the individual dioxins/furans compounds and adequate explanations as to how the data was compiled was not presented.

2) The dioxins and furans analytical method information was not adequately presented (it should be added to the footnotes of the tables). Since there is a high resolution and a low resolution method associated with the dioxins/furans analysis, this can potentially cause misinterpretations of the data. For example, a non-detection "ND" using the low resolution method may be significantly elevated compared to a ND for the high resolution method. This topic does not appear to have been mentioned and it can cause significant misinterpretations of the data (e.g. for example possibly 200-fold difference). Add notes to explain the methods associated with the analytical methods. ND's by the low resolution method should be qualified and not haphazardly combined using the TEQ method with results from the high resolution method.

3) Where the study relies on the low resolution mass spectroscopy method, the data set should be supplemented with additional collection of samples and testing with the high resolution method to confirm the results (in situations where NDs occurred, they should be verified by the high resolution method).

4) The plan failed to mention the groundwater colloidal transport mechanism. This transport method is described as sorption of the dioxin/furans compounds onto organic carbon suspended in the groundwater. Carbon particles less than 0.7 microns in size are known to travel freely in aquifer matrices and the sorption of the dioxins/furans onto these particles may facilitate transport in groundwater. The groundwater flow characteristics need to be understood to predict when the contaminants will impact the river and those may occur over a longer time period than is normally associated with contaminant transport in groundwater. For this reason Total Organic Carbon (TOC) analysis should be added to the groundwater monitoring program and aquifer characteristics such as gradient and transmissivity should be modelled to obtain estimates of dioxins/furans impacts to the river by this transport mechanism. Long-term monitoring programs may be needed to assess the significance of this transport mechanism in groundwater and to the river.

Sincerely yours,

ELECTRONIC REVIEW FOR THE ENVIRONMENT

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